THE IMPACT OF FINANCIAL INCLUSION ON HUMAN DEVELOPMENT INDEX IN SELECTED DISTRICTS OF MARATHWADA REGION

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1 INTRODUCTION:

"All our programmes should be helpful for the poor; we have to empower them through financial inclusion[1]" Twitted by Hon'ble Prime Minister Shri Narendra Modi.

"The financial inclusion had received a big boost with the opening of 17 crore bank accounts through the Pradhan Mantri Jan Dhan Yojana and Rs. 20,000 crore deposited in the Jan Dhan accounts reflected the 'Richness of India's poor'[2]" addressed by Hon'ble Prime Minister Shri Narendra Modi.

It is rightly said by Dr. Raghuram Rajan, Ex. Governor, RBI that the poverty reduction is speedily achieved through the requirement of widespread development. Therefore different development measures have been delivered by Reserve Bank of India. One of the development measures is Financial Inclusion through which the poverty reduction is possible. The financial inclusion is the addition of weaker sections , low income groups and underserved parts of the nation to the Financial sector by the way of providing financial access to the financial instruments[3]. Reserve Bank of India has defined Financial Inclusion *as "the process of ensuring access to appropriate financial products and services needed by all sections of the society in general and vulnerable groups such as weaker sections and low income groups in particular at an affordable cost in a fair and transparent manner by mainstream institutional players*."

1.1 Meaning of Financial Inclusion

The Financial Inclusion is the insertion of financial services to the underserved and weaker section of the society. It is the process of ensuring financial access to the unbanked population of the nation. The financial inclusion is the progression of financial system, financial instrument and overall financial system.

The financial inclusion is the inclusive financing. It includes the conversion of unbanked citizen to the banked customer having the access, usage and welfare related to the financial services. It is the release of financial services to the low income segments of the nation eradicating the financial exclusion where as the financial exclusion includes

the extent of underserved, unbanked, weaker section and below poverty line group of the society.

According to *Geoffrey Muzigiti, Oliver Schmidt report*[4], only 24% adults are having formal access to the banking services in Sub- Saharan Africa. The financial inclusion is far away in the underdeveloped and developing countries.

The socio- economic development of nation depends on the human development of citizens of that nation which in turn depend on financial inclusion parameters through the access and usage of formal financial services.

According to World Bank report (2012), the objectives of financial inclusion can be accomplished by the strategies of financial inclusion. The strategies are the plans of actions defined to serve financial access to the underserved people.

According to RBI, Financial Inclusion is the *process of ensuring access to appropriate financial products and services needed by vulnerable groups such as weaker sections and low income groups at an affordable cost in a fair and transparent manner by mainstream Institutional players.*

1.2 DEFINITION OF FINANCIAL INCLUSION

The financial inclusion is defined by various researchers, authors, financial regulatory bodies, financial service providers, bankers. These definitions can be explained with the help of following table.

Table No. 1.1 DEFINITION OF FINANCIAL INCLUSION

Sr.No.	Year	Author	Definition
1	2007	Reddy[5]	The process of financial inclusion consists of seeking each household and offering their inclusion in the banking system
2	2008	Usha Thorat[6]	Financial inclusion means the provision of affordable financial services, *viz.*, access to payments and remittance facilities, savings, loans and insurance services by the formal financial system to those who

			tend to be excluded.
3	2006	Leeladhar[7]	financial inclusion is delivery of banking services at an affordable cost to the vast sections of disadvantaged and low income groups
4	2006	Rakesh Mohan[8]	The financial exclusion signifies lack of access by certain segments of the society to appropriate, low cost, fair and safe financial products and services from mainstream providers.
5	2008	World Bank	the concept of financial inclusion in a comprehensive manner. It defines financial inclusion or broad access to financial services as absence of price or non price barriers in the use of financial services.
6	2009	The Scottish Executive[9]	Financial inclusion as access for individuals to appropriate financial products and services. This includes people having the skills, knowledge & understanding to make best use of those products & services.
7	2013	Chakrabarty[10]	"Financial Inclusion is the process of ensuring access to appropriate financial products and services – deposit accounts, payment services, micro-credit and micro-level insurance – to vulnerable groups such as weaker sections and low income groups by mainstream institutional players."
8		Nupur Acharya	"Real financial inclusion should ensure that a range of financial services are available to every individual. This includes a basic bank account, savings products suited to poor households, money transfer facilities, small loans, overdrafts, and insurance."

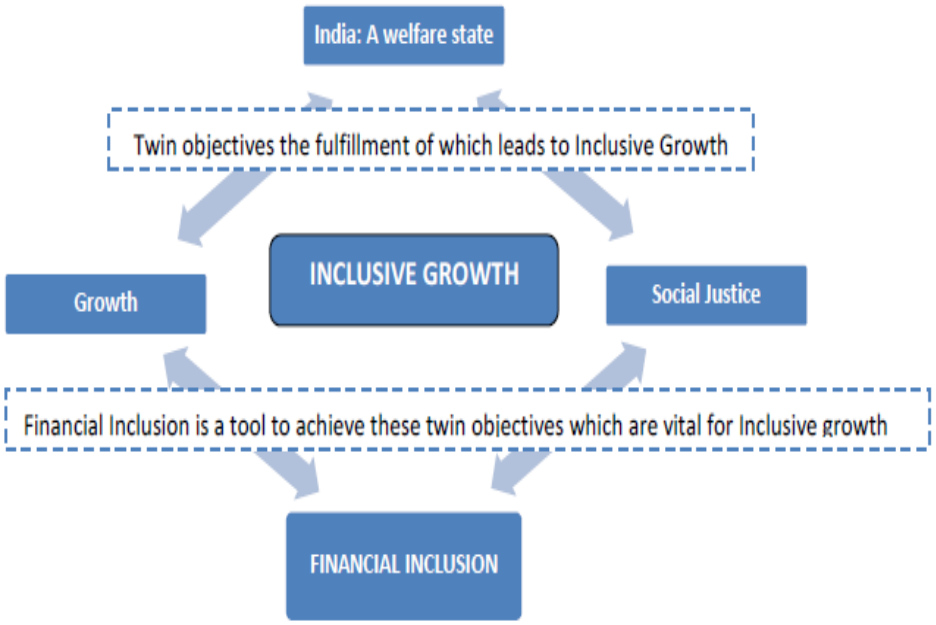
Source: Compilation of definition by different authors

1.2 Objectives of Financial Inclusion

According to UNCTAD survey report for the efficient delivery of the social security benefits, the policy could be linked to financial inclusion worldwide (UNCTAD, 2012). India is a welfare state and its twin objectives are growth and social justice as mentioned in the directive policy.

The fulfillment of these objectives leads to inclusive growth which calls for reducing inequalities by ensuring equal participation of all in the growth process. Financial Inclusion is a tool to achieve these twin objectives which are vital for inclusive growth (Figure-1.1).

Figure No. 1.1a Objectives of Financial Inclusion

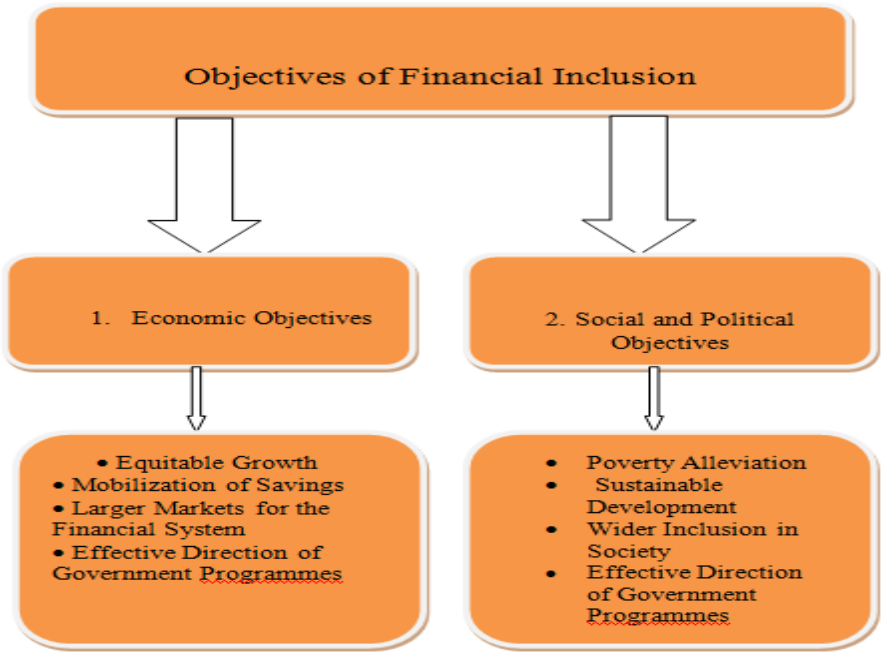

India: A welfare state
Twin objectives the fulfillment of which leads to Inclusive Growth
INCLUSIVE GROWTH
Growth
Social Justice
Financial Inclusion is a tool to achieve these twin objectives which are vital for Inclusive growth
FINANCIAL INCLUSION

Source: directive policy, UNCTAD, 2012

According to UNCTAD survey report, the financial inclusion has set two objectives. As per the guidelines directive policy,these objectives of financial inclusion are growth and social justice. India is the welfare nation; hence it has two objectives growth and social justice. Thus is possible with the help of financial inclusion or inclusive growth of financial services to the underserved section of people. According to Planning Commission, 2007, Financial inclusion has two major objectives as economic objectives and social and political objectives. The economic objectives of financial inclusion includes the Equitable Growth, Mobilization of Savings, Larger Markets for the Financial System, Effective Direction of Government Programmes and the social and

political objectives of financial inclusion includes Poverty Alleviation, Sustainable Development, Wider Inclusion in Society, Effective Direction of Government Programmes. The economic objectives are set for the development of economy through Equitable Growth, Mobilization of Savings, and Larger Markets for the Financial System, Effective Direction of Government Programmes. The economic development of the country can be achieved through these parameters.

Figure No. 1.1b Objectives of Financial Inclusion


Objectives of Financial Inclusion
1. Economic Objectives
2. Social and Political Objectives
• Equitable Growth
• Mobilization of Savings
• Larger Markets for the Financial System
• Effective Direction of Government Programmes
• Poverty Alleviation
• Sustainable Development
• Wider Inclusion in Society
• Effective Direction of Government Programmes

Source: Planning Commission Report, 2007

The social and political objectives of financial inclusion are comprised of Poverty Alleviation, Sustainable Development, Wider Inclusion in Society and Effective Direction of Government Programmes.

Hence these all economic, social and political objectives form the socio economic objectives of financial inclusion leading human development. The following figure explain the objectives of financial inclusion as

1.3 IMPORTANCE OF FINANCIAL INCLUSION

The basic objective of financial inclusion is to have health development, socio-economic development and poverty reduction of people. In simple words, the objective of financial inclusion is human development. The fundamental requirements of human being i.e. food, cloth, shelter, education, healthcare are assisted by financial inclusion indirectly. The financial inclusion does not reduce the poverty directly but it improves the standard of living. It assists the poor people to start their own business by financial assistance of formal access of financial services such as loans. Through the growth of their small business into large business, they may reduce their poverty indirectly. The importance of financial inclusion lies in the following financial needs such as

1. Habit to save money – The poor people, small businessmen or lower income people do not have the habits of savings; The financial inclusion provides a base to develop the habit of saving the money that meet the future requirements of business or businessman.

2. Serving Credit Facilities – The weaker section of the business has been financially assisted by the financial inclusion program through the loan services. The small scale or medium scale businesses are the major focus of financial inclusion. Hence there are no further requirements of private moneylenders. Hence easy access at lower cost to the loans is provided by financial inclusion. Hence financial inclusion is very essential part of financial system.

3**. Plug gaps and leaks in public subsidies and welfare programmes** – The Central and state governments provide subsidies to various small scale enterprises by the way of financial inclusion. Various social welfare policies are implemented through the financial inclusion

According to Thorat[11] the financial inclusion in India is very important because of the following reasons

1. **Limited access to financial services:** In India, the underserved population meets their financial needs through the private moneylenders at very high interest rates**.** Due to the growth of financial services, it would be possible to get formal and easy access to the undeserved section by financial inclusion.
2. **Credit and Insurance Policy**— the financial inclusion provides the easy and fast access to the Credit and Insurance Policy.
3. **Formal Identity:** The financial inclusion provides the formal identity, personal identity to the individual person through the financial assistance schemes.

According to the Department of Financial Services[12], Government of India, the objective of Financial Inclusion is to widen financial services to the large underserved group of nation. This is done to unbolt its development prospective. Along with this, the object to provide inclusive growth by the means of serving credit facilities to the poor people is the other concern of financial inclusion.

1.4 THE DEVELOPMENT OF FINANCIAL INCLUSION

The word financial inclusion was first used by K C Chakraborthy, the chairman of Indian Bank in the year 2005 in India. It was first used in the Mangalam Village. The banking facilities were used by all households of Mangalam Village. The norms of opening bank account were relaxed in order to achieve the objective of financial inclusion.

In January 2006, in order to reach to the bottom of pyramid or root level low income group, the Reserve Bank of India allowed the intermediaries along with the banks to use the financial inclusion schemes. These intermediaries include Self Help Group, NGOs, micro finance organizations to render the financial and banking services to the underserved people. The banks call them as a Business Facilitators or Business Correspondents. Reserve Bank of India ordered the all commercial banks to achieve the target of 100% financial inclusion by the way of different programs, campaigns and the results were seen as 100% financial inclusion in all the districts of states or U.T.s like Pondicherry, Himachal Pradesh and Kerala.

The illiteracy, financial education, lack of financial knowledge, access, and reach were some of the challenges of financial inclusion. It is clearly observed that the financial inclusion has achieved remarkable development in its sector. Hence 100% financial inclusion may be reached with such types of efforts. According to the World Bank Group President Jim Kim[13], the poverty can be eliminated by using the financial inclusion as a key by the year 2030. The use of Information and Technology Communication (ICT) can assist in achieving this target. The access to the financial system will be achieved at the end of year 2020 by the mission Universal Financial Access by 2020.

1.5 THE PROMOTERS OF FINANCIAL INCLUSION

The financial inclusion is spread and promoted by entire Indian financial system. All the components of Indian financial system support, regulate and functions for financial inclusion. It is comprised of Commercial Banks, Regional Rural Banks (RRBs), Urban Co-operative Banks, Primary Agricultural Credit Societies and post offices. These all financial companies cater to the financial needs of the people. Basically the efforts taken by the RBI and the Government of India towards promoting financial inclusion have improved access, usage and welfare measures of financial inclusion.

Reserve Bank of India (RBI) is the major promoter and regulator of financial inclusion in India. On the directive principles of Government of India and Reserve Bank of India, different financial institutions such as National Bank for Agriculture and Rural Development (NABARD), Public sector banks and private sector banks, Regional Rural Banks, Urban Co-operative Banks and Primary Agricultural Credit Societies perform promotional roles in the expansion of financial inclusion strategies. The strategies of financial inclusion include namely opening bank account (converting unbanked to banked), Allowing credit facility, branch penetration, ATM penetration, population per branch, distribution of banking branches, credits, micro finance, of SCBs and Co-operative banks, deposits.

1.6 Strategies of Financial Inclusion

The financial inclusion schemes can be reached to the target population through the strategies of financial inclusion. According to the World Bank President Jim Kim[14], Universal Financial Access to the all banking services will be reached by the year 2020 in the mission named Universal Financial Access 2020. The World Bank Group has suggested various provisions to enhance the financial inclusion policy to reach to the poor unbanked persons for inclusive growth. These suggestions of World Bank Group are as follows

- Opening An Account**:** The basic accounts are needed to be opened to underbanked and underserved population.
- Internet Banking and Mobile Banking.
- Addition of Non Banking Institutions for banking transactions.
- Developing Agent Networks for the financial inclusion purpose.
- All cash transaction should be flowed through banking.
- Financial Literacy Program

.

1.7 Barriers of Financial Inclusion

The financial inclusion has several barriers that affects on the spread of the financial inclusion programs. These barriers are Gender Issues, Age Factor, Legal Identity, Limited literacy,Place of living, Psychological and cultural barriers, Bank charges, Terms and Conditions, Level of Income and Type of occupation

Kempson (2006) narrated about the causes of financial exclusion. He explained that the causes differ from nation to nation leading to the financial exclusion,. He observed that the KYC norms, rules, regulations, banking charges, access and traditional barriers are some of the barriers of financial inclusion.

1.8 Recommendations of RBI for Promoting Financial Inclusion

The Report of the Committee on Medium-term Path on Financial Inclusion of Reserve Bank of India[15] has given the following recommendations as

1.1 Structural reforms in financial policies.

1.2 Improved Mobile Technology in Banking

1.3 Promotion of account opening for females. Example—Sukanya Shiksha Scheme

1.4 Linkage to Aadhar Card.

1.5 Improving Service delivery through Mobile technology

1.6 Improved Credit system

2 Facilitation of Usage

2.1 better leverage technology to facilitate usage

2.2 better utilization of the mobile banking facility

3 Increase Formal Credit Supply

3.1 Aadhaar-linked mechanism for Credit Eligibility Certificates.

3.2 directly lend to tenants / lessees against such credit eligibility certificates.

3.3 the subsidy amount into a universal crop insurance scheme for farmers.

3.4 Gold Kisan Credit Card (KCC)

3.5 Digitization of all financial records, mortagage records etc

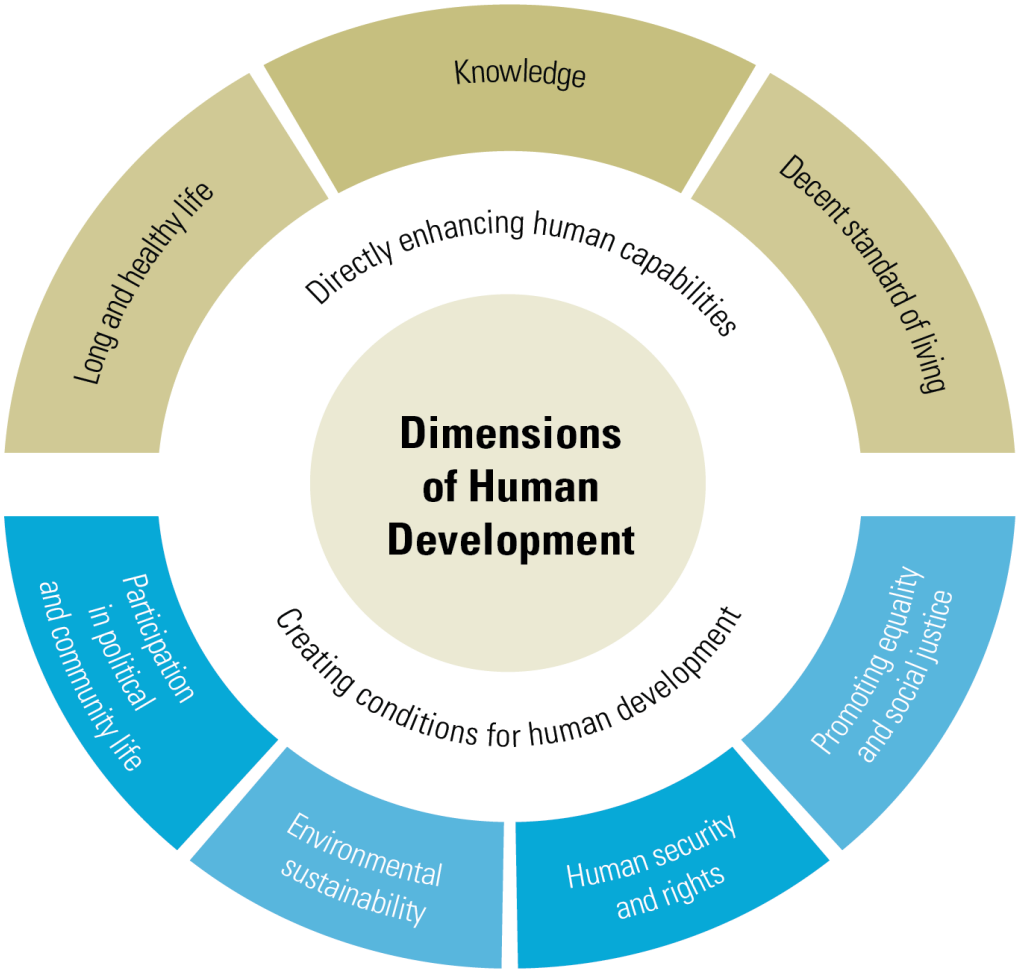
3.6 Assisting Producer Organisations.

3.7 a universal crop insurance scheme

3.8 the crop insurance subsidy.

1.09 Meaning of Human Development Index

According to Human Development Reports of United Nations Development Programme[16], Human development is about expanding the richness of human life, rather than simply the richness of the economy in which human beings live. The human development is concerned about the socio economic development and life pattern of human beings.



Source: http://hdr.undp.org/en/humandev

People: The main focus of human development is to improve the living standard of people and welfare and wellbeing of human beings.

Opportunities: It gives the opportunity to live with the values of human being. The human development provides the opportunity to provide right conditions for the human development. The development of all aspects of human beings is possible with the opportunities provided by the human development concept.

Choice: The human development provides choice and opportunities to live as per the expectations of human beings.

Human Development Index

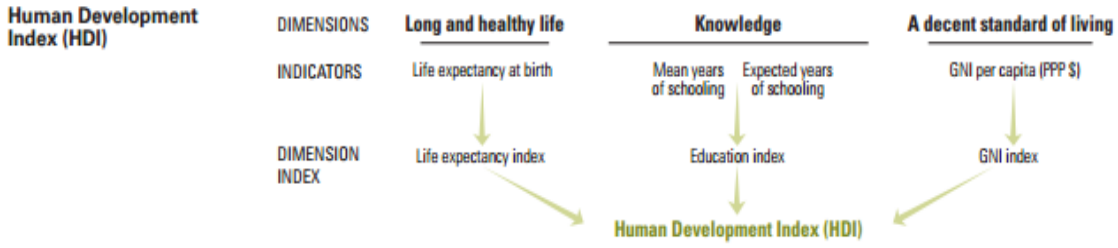
The appraisal of socio-economic development of nation is measured through a statistical measure called Human Development Index (HDI). It was created by United Nations.

According to Human Development Reports of United Nations Development Programme[17,] It is a precise extent of average achievement in key dimensions of human development: 1) a long and healthy life, 2) being knowledgeable 3) A decent standard of living.

There are three basic dimensions of human development. They are

1) **Health Dimension**
2) **Education Dimension**
3) **The standard of living dimension**

The life expectancy at birth measures the health dimension, The mean of years of schooling (>=25 years) and expected years of schooling for children of school entering age measures the education dimension. The gross national income per capita assesses the standard of living dimension.

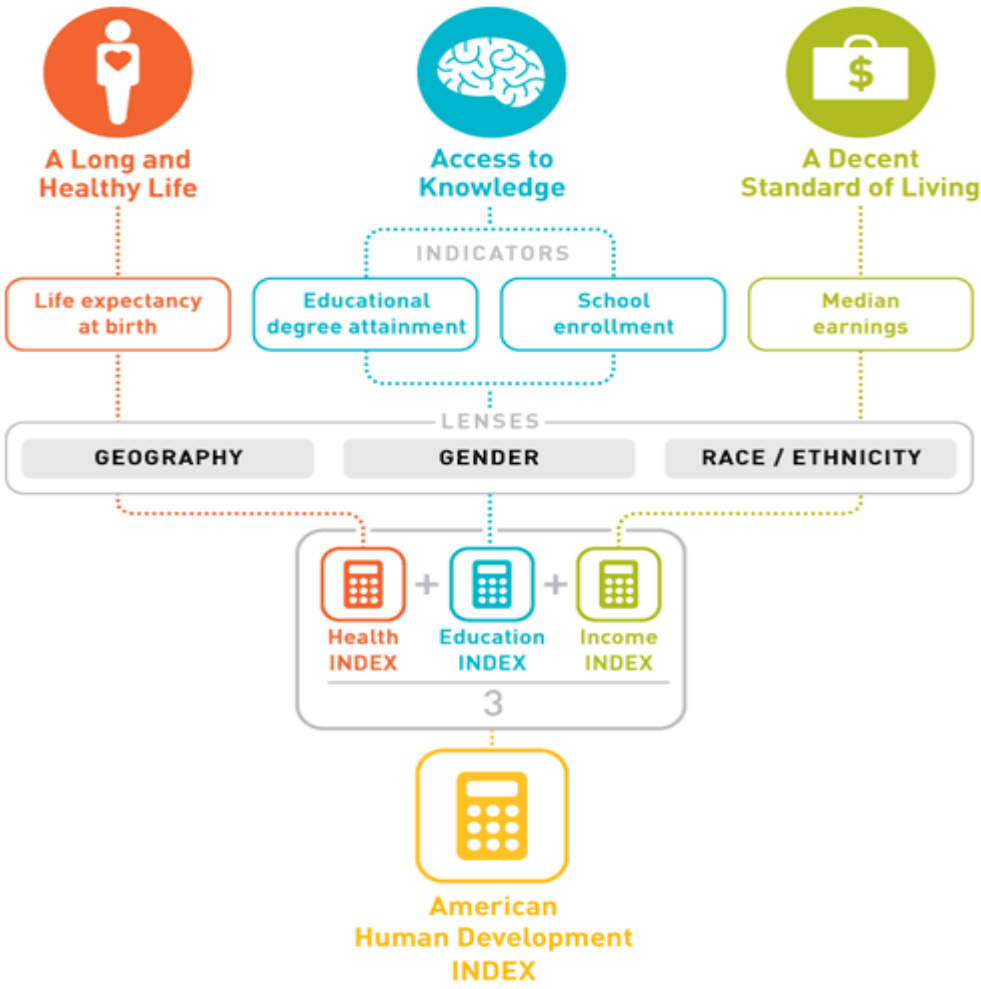


Source: http://hdr.undp.org/en/content/human-development-index-hdi

American HDI[17]

The Measure of America presents a modified American Human Development Index. The American HD Index measures the same three basic dimensions as the standard HD Index, but it uses different indicators to better reflect the U.S. context and to maximize use of available data. For example, while the standard index measures access to knowledge using the average number of years that students spend in school, we have chosen instead to use educational attainment, a more demanding indicator

The Human Development Index of America represents three basic dimensions as the standard Human Development Index namely Health index, Education index and Income index.



Source: http://www.measureofamerica.org/human-development/

Health index is shown by the long and healthy life given by the life expectancy at birth. The Education index is presented by access to knowledge. The indicators of educational index are school enrolments and educational degree attainment. Third index is A Decent standard of living index confirming median earnings of race or ethnicity.

1.10 Objectives of Human Development Index

Basically the objective of human development index is to rank different countries on the basis of scale of a human development. The objectives of human development index are as follows

1) To measure and to compare health dimension of different countries.
2) To measure and to compare education dimension of different countries.
3) To measure and to compare standard of living dimension of different countries.

1.11 Significance of Human Development Index

The Human Development Index is significant as follows

1) It is multidimensional in its nature as it counts literacy rate, life expectancy, per capita income, mean life of schooling etc.
2) It is the appropriate measure of development as it includes all aspects of development.
3) It differentiates and classifies different countries based on its index values.

1.12 Components of Human Development Index

According to Human Development Reports of United Nations Development Programme[18] , the dimensions of Human development index as Health index, Education index and Income Index are categorized into their components. The health index is having the component Life expectancy at birth, the component of education index are expected years of schooling Mean years of schooling and whereas the income index is having the component as Gross national income (GNI) per capita and GNI per capita rank minus HDI rank.

1.13 Measuring Human Development Index

The Human Development Index is the statistical measure developed by the Indian economist Amartya Sen and Pakistani economist Mahbub ul Haq. The United States has modified the formula to calculate Human Development Index. The socio-economic development of a nation is measured and compared through the Human Development Index. It includes 3 dimensions of index as

→ Health Index

→ Education index

→ Standard of Living Index

Following formula is used to calculate Human Development Index (HDI) as

HDI = 3√LEI . EI . II

Where LEI= Life Expectency Index (LEI), EI= Education Index (EI) and II= Income Index (II)

Step 1: Calculate LEI Life Expectency Index (LEI) = LE - 20 / 85 – 20

Step 2: Calculate EI Education Index = MYSI + EYSI / 2

Step 3: Calculate MYSI and EYSI (MYSI) = MYS / 15 & (EYSI) = EYS/18

MYSI= Mean Years of Schooling Index and EYSI= Expected Years of Schooling Index

Step 4: Calculate II Income Index (II) = ln(GNIpc) - ln(100) / ln(75,000) - ln(100)

From all these values, the calculation of Human Development Index of a nation (HDI) is done as follows For Example: Lets us calculate the HDI of India

Average Indian Life Expectancy – 65

Life Expectency Index (LEI) = LE - 20 / 85 – 20 = 65 - 20/85 – 20 = 45/65 LEI = 0.692

EI= Education Index (EI) = Mean Years of Schooling (4.4) and Expected Years of Schooling (10.7)

→ Education Index = MYSI + EYSI / 2

Mean Years of Schooling Index MYSI = MYS / 15= 4.4 / 15 = 0.293

Expected Years of Schooling Index EYSI = EYS/18 = 10.7 / 18 = 0.594

So, Education index = 0.29 + 0.59 / 2 = 0.88 / 2 = 0.443 EI = 0.443

II= Income Index (II)= 5350

Income Index (II) = ln(GNIpc) - ln(100) / ln(75,000) - ln(100)

=ln(5,350) - ln(100) / ln(75,000) - ln(100)

= 8.584 - 4.605 / 11.225 - 4.605 = 3.979 / 6.62 II = 0.60115 Mean Years of Schooling - 4.4 So, Human Development Index (HDI) of India is

HDI = 3√LEI . EI . II = 3√0.692 X 0.443 X 0.60115 = 3√ 0.184 HDI = 0.56953

Enter the Life Expectancy, Mean Years of Schooling, Expected Years of Schooling and Income Index value to find the HDI of any country by using the simple HDI Calculator.

1.14 IMPACT OF FINANCIAL INCLUSION ON HUMAN DEVELOPMENT

The human development is influenced by the financial inclusion. The financial inclusion provides the access, usage and availability of financial services to human beings. The financial services such as credit services, banking services are useful for people. The financial requirements of human beings can be fulfilled through the financial inclusion. The small businessmen, entrepreneurs and poor people can be benefited by the financial inclusion. It is seen that the country with higher index of financial inclusion, is a developed country and human development index is more. The human development is

more in country with higher index of financial inclusion. Whereas the country with smaller index of financial inclusion, is a under developed country and human development index is low. The human development is less in country with smaller index of financial inclusion. It means that greater the extent of the financial inclusion, greater will be the human development. Smaller the extent of the financial inclusion, lesser will be the human development.

1.15 Significance of Research Problem

The financial inclusion has made revolutionary modifications in the lives of rural and urban households. The financial inclusion has a significant impact on the different aspects of human development index. The access to the banking services has been increased due to the financial inclusion. The quality of the financial services has been standardized after the introduction of financial inclusion program. The usage of financial services has been grown up. The welfare measures have been augmented. The Social Empowerment, Economic Empowerment and Economic development sighted after the financial inclusion. The Income, Poverty alleviation and inequality measures have been transformed due to the financial inclusion. The education, employment and healthcare aspects revolutionized after the introduction of financial inclusion program. The social exclusion is reduced leading to the social integration. It means that Human development is observed after the introduction of financial inclusion program. That's why the research topic The Impact of Financial Inclusion on Human Development Index in Selected districts of Marathwada region has been selected and has significance as it measures the human development parameter.

1.16 Objectives of Research study:

1) To compare the impact of Access to the Financial Services on HDI in rural and urban households of Selected districts of Marathwada region.

2) To contrast the impact of Quality of the Financial Services on HDI in rural and urban households of Selected districts of Marathwada region.

3) To study the difference in impact of Usage of the Banking Services on HDI in rural and urban households of Selected districts of Marathwada region.

4) To evaluate the Welfare measures of the Financial (Banking) Services on HDI in rural and urban households of Selected districts of Marathwada region.

5) To assess the impact of Financial Inclusion on Social Empowerment Aspect of HDI in rural and urban households of Selected districts of Marathwada region.

6) To analyze the Impact of Financial Inclusion on Economic Empowerment Aspect of HDI in rural and urban households of Selected districts of Marathwada region.

7) To relate the impact of Financial Inclusion on Economic development Aspect of HDI in rural and urban households of Selected districts of Marathwada region.

8) To compare the impact of Financial Inclusion on Income, Poverty alleviation and inequality aspects of HDI in rural and urban households of Selected districts of Marathwada region.

9) To distinguish the impact of Financial Inclusion on Education, Employment and Healthcare aspects of HDI in rural and urban households of Selected districts of Marathwada region.

10) To differentiate the impact of Financial Inclusion on Social Integration & Exclusion aspects of HDI in rural and urban households of Selected districts of Marathwada region.

1.17 Hypothesis of Research Study

The hypotheses under study are categorized into null hypothesis (H_0) and alternative hypothesis (H_a) designed as per the objectives of study are as

1) Null hypothesis (H_{01}): There is no difference between the impact of Access to the Financial Services on HDI in rural and urban households of Selected districts of Marathwada region.

2) Null hypothesis (H_{02}): The impact of Quality of the Financial Services on HDI in rural and urban households of Selected districts of Marathwada region is same.

3) Null hypothesis (H_{03}): The parity is observed in impact of Usage of the Banking Services on HDI in rural and urban households of Selected districts of Marathwada region.

4) Null hypothesis (H_{04}): The Welfare measures of the Financial (Banking) Services on HDI in rural and urban households of Selected districts of Marathwada region are not different.

5) Null hypothesis (H_{05}): The impact of Financial Inclusion on Social Empowerment Aspect of HDI in rural and urban households of Selected districts of Marathwada region is identical.

6) Null hypothesis (H_{06}): There is no significant difference between the impact of Financial Inclusion on Economic Empowerment Aspect of HDI in rural and urban households of Selected districts of Marathwada region.

7) Null hypothesis (H_{07}): The relationship between the impact of Financial Inclusion on Economic development Aspect of HDI in rural and urban households of Selected districts of Marathwada region is similar.

8) Null hypothesis (H_{08}): There is equal impact of Financial Inclusion on Income, Poverty alleviation and inequality aspects of HDI in rural and urban households of Selected districts of Marathwada region.

9) Null hypothesis (H_{09}): The impact of Financial Inclusion on Education, Employment and Healthcare aspects of HDI in rural and urban households of Selected districts of Marathwada region are not distinct.
10) Null hypothesis (H_{010}): The differentiation is not observed in the impact of Financial Inclusion on Social Integration & Exclusion aspects of HDI among rural and urban households of Selected districts of Marathwada region.

2 Review of Literature

Sr. No.	Year	Author/ website/ Institution	Keywords	Objective	Findings
1	2012	Global Partnership for Financial Inclusion[1]	Usage, Access and Quality of Financial Inclusion	To study the indicators/ dimensions of financial inclusion.	The indicators or dimensions- **Usage** indicator is related to Formally banked adults, Adults with credit at regulated institutions, Adults with Insurance, Cashless transactions, Mobile transactional use, High frequency of account use, Saving propensity, Remittances, Formally banked enterprises. **Access** indicator relates to Points of Service, E-money accounts, Interoperability of Points of Service. **Quantity i**ndicator relates to Financial Knowledge, Financial behavior, Disclosure demands; Dispute Resolution, Cost of Usage and Credit Barriers.
2	2015	World Bank[2]	Usage, Access and	To measure the financial inclusion	The indicators or dimensions- **Usage** indicator is related to the ways of using

			Quality of Financial Inclusion		financial services for example promptness and period of the usage of financial service, average saving balance, number of transactions per account, number of Internet payments.
3	2014	∗Noelia Cámara* and David Tuesta[3]	Financial inclusion, Principal Component Analysis, inclusion barriers.	To measure the financial inclusion.	The degree of financial inclusion is measured by 3 dimensions: usage, barriers and access to financial inclusion. *Weights* given to the dimensions are measured by employing a two-stage Principal Component Analysis.
4	2013	Global Partnership for Financial Inclusion[4]	Financial literacy and the quality of financial service.	The aim of deepening the understanding of the financial inclusion landscape.	Key focus area of financial literacy under the Russian G20 Presidency, the GPFI developed a more comprehensive set of financial inclusion indicators.
5	2016	Global Partnership for Financial Inclusion[5]	use, availability, and quality of digital financial services	To modify the indicators of financial inclusion as per the requirement	The modification of indicators was determined by the expansion of new digital models and the accessibility of latest data on both demand and supply of digital financial services. **The usage indicator** (Adults) includes Adults with an Account, Number of Accounts, Adults with credit at regulated institutions, Adults with insurance, Cashless transactions, Adults using digital payments, High frequency of account use, Saving Propensity The usage

					indicator (Enterprise) includes Formally banked Enterprises, Enterprises with outstanding loan or line of credit at regulated institutions, Digital payments. **ACCESS INDICATORS: Physical points of service,** Debit card Ownership, Enterprise points of service, Interoperability. **QUALITY INDICATORS: Financial Literacy And Capability:** Financial Behavior, **QUALITY INDICATORS:** Market Conduct & Consumer Protection**,** Disclosure Requirements, Dispute Resolution, quality indicators: barriers to use, credit barriers.
6	2009	Financial Inclusion Data Working Group (FIDWG)[6]	Key dimensions of the Core Set: access and usage	The Core Set of Financial Inclusion Indicators as a measurement tool to provide a method for capturing the status of financial inclusion within countries.	The Core Set of Financial inclusion Indicators provides 2 basic dimensions of financial inclusion: *access* and *usage* of financial services. The *quality* dimension is a more complex topic both conceptually and in terms of measurement, typically requiring demand-side surveys and the use of qualitative indicators.
7	2011	Financial Inclusion Data Working Group (FIDWG)[7]	Dimensions of financial inclusion: Access, Usage and Quality	To measure the financial inclusion	Access: Availability of formal, regulated financial services: Physical proximity Affordability Usage: Actual usage of financial services and products: Regularity Frequency Duration of time used Quality: Products are

					well tailored to client needs Appropriate segmentation to develop products for all income levels.
8	2010	Alliance for Financial Inclusion[8]	Components of financial Inclusion: Access, Quality, Usage and welfare.	To measure the components of financial inclusion	The financial inclusion can be measured through 4 lenses or its components as **Access**– capability to utilize existing financial services from financial institutions. Recognize latent barriers to opening account & using a bank account cost and material nearness of bank service points (branches, ATMs, etc). Including the number of open accounts across financial institutions and approximation of proportion of the population with an account. **Quality** – Relevance of the financial service experience of the consumer, established in approaches and views towards existing services. It is used to measure the character and intensity of the association between the financial service supplier and the customer, existing options its choice. **Usage** –use of financial services mainly on the durability and strength of financial service use. Promptness, frequency and period of use over time. Grouping of financial services utilized by household. **Welfare** – its impact on the lives of consumers, transformations in utilization, selling action and wellness.
9	2008	Mandira Sarma[9]	Index of financial	To evaluate the index of financial	**The dimension I: Banking penetration** banking should be penetrated among all

			inclusion	inclusion	households (served & underserved). The number of citizens holding a bank account is a gauge of the banking penetration of the system. If 100% households have bank accounts, value of this measure is 1.Researcher may use number of bank accounts as a proportion of the total population as an indicator of this dimension. **The dimension II: Availability of banking services:** It should be easily available to its users. It is measured by the number of bank branches (per 1000 population) and/or by the number of ATM per 1000 people, or the number of bank employees per customer. **The dimension III Usage:** Only having bank account is not enough, the customer should access the account or use the account frequently.
10	2013	Joanna Ledgerwood[10]	Financial Services, Financial Management, Demand Side, Supply Side, Research Agenda, Alliance For Financial Inclusion	Measuring Financial Inclusion and Assessing Impact	It provides an outline of factors to measure and supervise financial inclusion. The Alliance for Financial Inclusion (AFI) gave 4 dimensions of financial inclusion—access, usage, quality, and welfare—all dimensions need complex data collection and analysis. The information is higher in Demand-side as compared to the supply-side research. The demand side research serves new avenues for analyzing how the poor manage their financial lives, highlighting the multifaceted nature of

			(AFI)		financial management. Whereas Supply-side research gives data on number of providers, services used, and access points, and may also collect data on volume and costs.
11	2016	Mr.Nikhil Yadav et al[11]	financial inclusion, PMJDY, Social Security, Welfare	To study Financial inclusion through good governance in India: A case of Pradhan Mantri Jan Dhan Yojana	Steps to achieve and Indicators of financial Inclusion: **Access:** There should be at least one bank account attached with each household. **Quality:** The debit card & overdraft services should be available to each household. **Usage:** The Direct benefit transfer (DBT) will be applicable to all users. **Welfare**: Every account holder should get the insurance of Rs. One lakh.

3 Research Design

Sr.No.	Parameter	Description
1	**Type of Research**	Ex Post Facto Descriptive Research
2	**Nature of Research**	Quantitative
3	**Research Instrument**	Structured questionnaire and observation
4	**Dependent Variable**	All essential parameters of human development
5	**Independent Variables**	All essential parameters of financial inclusion
6	**Control over Variables**	No Control- Ex Post Facto
7	**Survey Period**	January to September 2016
8	**Type of Products**	Products of Financial Inclusion
9	**Methods of Data Collection**	Sample Survey Method through Interrogation
10	**Universe**	Users of Financial Inclusion Services in Selected districts of Marathwada region.
11	**Population**	Users of Financial Inclusion in rural & urban parts of Selected districts of Marathwada region.
12	**Sampling Frame**	Rural and Urban Users of Financial Inclusion Equally in Selected districts of Marathwada region.
13	**Sample Elements**	Users (Households) of Financial Inclusion Services in

		Selected districts of Marathwada region (Especially past financially excluded households who have been served the financial inclusion services at present) i.e. unbanked respondents turning into banked respondents.
14	**Sample Size Determination**	Using Mean and Proportionate Sampling Formula
15	**Calculated Sample Size**	400 respondents (200 rural and 200 urban)
16	**Net Responses**	380 respondents (190 rural and 190 urban)
17	**Response Rate**	90% rural & 90% urban respondents.
18	**Rejection Rate**	10% rural & 10% urban respondents.
19	**Sampling Method**	Proportionate Stratified Sampling followed by Multilevel Non Probability Convenient Sampling
20	**Sources of Data Collection**	Primary and Secondary sources.
21	**Primary Sources**	Structured questionnaire and observation.
22	**Secondary sources**	Journals, Articles, Books, Magazines, Digital library, e resource databases and many other published data.
23	**Measurement Scales**	Nominal, ordinal and interval scale
24	**Questions Types**	Dichotomous, open ended, closed ended and ranking.
25	**Rating Scales Used**	Five Point Likert Scale.
26	**Data Interpretation**	Through graphs, descriptive statistics and inferential statistics
27	**Statistical Tools**	Z test, chi square, ANOVA, descriptive statistical tools and parametric and non parametric statistical tests.
28	**Statistical Software Package**	Ms Excel 2010 and SPSS 20.

Source: Researchers' Compilation

4 Data Analysis and Interpretation

The Data Analysis and Interpretation will be done after doing filed survey based research and data collected through filled questionnaires from the respondents with the help of different parametric and non parametric statistical tests.

5 Findings, Conclusions and Suggestions

Findings, Conclusion & Suggestions will be drawn after data analysis and interpretation.

6 Probable Chapter Scheme of the Research Study

The probable chapter scheme of the research study is as follows

Chapter I Introduction

Chapter II Review of Literature

Chapter III Overview of Financial Inclusion & Human Development Index

Chapter IV Research Methodology

Chapter V Data Analysis and Interpretation

Chapter VI Findings, Conclusion and Suggestions

Annexure I Questionnaire

Annexure II Bibliography

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